

saws 70. In the present invention, since the belt saws 70 are only 3 mm in thickness, the amount of stone sliced away and consumed is greatly reduced, increasing productivity by approximately 50% compared to the conventional circular shank type stone slicer.

Industrial Applicability

According to the present invention, as platforms are lowered, a plurality of belt saws installed in parallel with each other rotate along an endless track, and slice stone placed on a base at a constant interval.

Since several stone plates are simultaneously obtained from rough stone, the manufacturing cost can be reduced. Also, since thin belt saws are used in slicing stone, the thickness of stone sliced and disposed away can be minimized and sludge generated by slicing can be reduced. Thus, the treatment cost of the sludge can be reduced and secondary environmental pollution can also be prevented.

What is claimed is:

1. A stone slicer comprising: a base (10) on which stone is placed; four columns (22, 24, 26, 28) vertically installed at four edges of the base (10); a pair of platforms (30, 30') installed left and right so as to be capable of simultaneously elevating along either side of the columns (22, 24, 26, 28); platform driving means (40, 40') for elevating the platforms (30, 30'); one or more endless track type belt saws (70) each having opposite ends mounted in parallel with driving pulleys (50) and driven pulleys (60) provided at the platforms (30, 30'); and belt saw driving means (80) for driving the belt saws (70) to slice the stone placed on the base (10) to a predetermined thickness while rotating along an endless track by rotating the driving pulleys (50).
2. The stone slicer of claim 1, wherein the belt saw driving means (80) comprises: a driving motor (81); a helical gear (83) connected to the driving motor (81) and a power transmission means (82) including a belt or a chain to be driven and horizontally elongated in the front and rear directions of the platform (30); vertical gears (84) geared into the left and right of the helical gear (83); and driving pulleys (50) axially-connected to the vertical gears (84).
3. The stone slicer of claim 2, wherein each pair of auxiliary pulleys (85, 86) are

installed in the driving pulleys (50) and the driven pulleys (60), thereby adjusting an interval between the belt saws 70 and imparting tension to the belt saws (70).

4. The stone slicer of claim 1, wherein the driving means (40, 40') for elevating the platforms (30, 30') include driving motors (42, 42') installed at either side of the upper plate 10' left and right, sprockets(22', 24', 26', 28') installed at the upper ends of the columns (22, 24, 26, 28), and chains (44, 44') installed between the columns (22, 24) and the driving motor (42) and between the columns (26, 28) and the driving motor (42'), whereby the columns 22, 24, 26, 28 rotate and then the platforms 30, 30' threaded with the columns 22, 24, 26, 28 elevate accordingly as the driving motors 42, 42' of either side are synchronized and rotate forward and backward at a constant speed.